HIV Treatment Regimen Failure

What is an HIV treatment regimen?

The recommended treatment for HIV infection is a combination of three or more anti-HIV medications. Combination regimens are often called **H**ighly **A**ctive **A**ntiretroviral **T**herapy (**HAART**). Each HAART regimen is tailored to the individual patient - there is no one "best" regimen. You and your doctor will choose medications that are best for you.

Can HAART cure HIV infection?

Anti-HIV medications can slow down HIV replication by interfering with the virus' life cycle but they cannot eliminate the virus completely. HAART can treat your HIV infection and help keep you healthy, but it cannot cure your HIV infection.

What is regimen failure?

Regimen failure occurs when the anti-HIV medications you are taking do not adequately control the infection. Factors that may cause regimen failure include:

- Poor health before starting the treatment regimen
- Poor adherence to the regimen (not taking medications exactly as instructed by your doctor, including missed doses)
- Previous anti-HIV treatment and/or drug resistance
- Alcohol or drug abuse
- Medication side effects, medication toxicity, or interactions with other medications
- Medication poorly absorbed by the body
- Medical conditions or illnesses other than HIV infection

What are the three types of regimen failure?

1. **Virologic failure:** Regimens should lower the amount of HIV in your blood to undetectable levels. Virologic failure has occurred if HIV can still be detected in the blood 48 weeks after starting treatment, or if it is detected again after treatment had previously lowered the level to undetectable.

Terms Used in This Fact Sheet:

Antiretroviral: *a medication that interferes with replication of retroviruses. HIV is a retrovirus.*

Baseline count: *an initial measurement (such as a CD4 count or viral load test) made before starting therapy and used as a reference point.*

CD4 count: *CD4 cells, also called T cells or CD4$^+$ T cells, are white blood cells that fight infection. HIV destroys CD4 cells, making it harder for your body to fight infections. CD4 count is the number of CD4 cells in a sample of blood.*

Drug resistance: *HIV can mutate (change form) while a person is taking anti-HIV medication. This may result in HIV that cannot be controlled with medication.*

Toxicity: *the harm a medication can do to your body.*

2. **Immunologic failure:** An effective regimen should also increase the number of CD4 cells in your blood. Immunologic failure occurs when the CD4 count decreases below a baseline count or does not increase above the baseline count within the first year of therapy.
3. **Clinical failure:** Clinical failure has occurred if you experience an HIV-related infection or a decline in physical health despite at least 3 months of anti-HIV treatment.

Virologic failure is the most common kind of regimen failure. People with virologic failure who do not change to an effective drug regimen usually progress to immunologic failure within about 3 years. Clinical failure may follow immunologic failure.

What happens if my regimen fails?

If your treatment regimen fails, your doctor will evaluate your treatment history, medication side effects, problems you may have had with taking the medications as prescribed, your physical condition, and results of drug resistance testing to determine why your regimen is failing. You and your doctor may then select a new drug regimen to better control your infection.

For more information:

Contact your doctor or an *AIDSinfo* Health Information Specialist at 1-800-448-0440 or **http://aidsinfo.nih.gov**.

This information is based on the U.S. Department of Health and Human Services' *Guidelines for the Use of Antiretroviral Agents in HIV-Infected Adults and Adolescents* (available at **http://aidsinfo.nih.gov**).